

## REMARKS/ARGUMENTS

This paper is submitted in response to the Office Action mailed November 12, 2009. A Request for a One Month Extension of Time under 37 CFR 1.136(a) is submitted herewith, along with the fee prescribed by 37 CFR 1.17(a)(1). The response is therefore timely.

Claims 1-12 and 14-20 were examined, and all stand rejected. As set forth above, these claims have been cancelled and replaced by new claims 21-30. As discussed below, it is respectfully submitted that claims 21-30 are patentable over the art of record. Reconsideration is therefore respectfully requested.

### Objections to the Specification

The specification was object to for the reference to “CARI-6,” which was deemed to be a trademark. The specification has been amended to provide a generic description of the computer program known as “CARI-6,” which was developed at the Civil Aerospace Medical Institute of the Federal Aviation Administration. The program is well-known in the art. A description is found at [www.faa.gov/data\\_research/research/med\\_humanfacs/areomedical/radiobiology/cari6](http://www.faa.gov/data_research/research/med_humanfacs/areomedical/radiobiology/cari6).

### Rejections under 35 USC §112

Claims 3 and 5 were rejected under Section 112, second paragraph. It is believed that this rejection has been rendered moot by the new claims submitted herewith.

### Rejections under 35 USC §101

Claims 1-10 and 14-20 were rejected under Section 101 for claiming non-statutory subject matter, on the grounds that the claims were directed to a system that encompassed a human being. New claims 21-30 are method claims, and their subject matter does not encompass a human being. Therefore, it is respectfully submitted that claims 21-30 define statutory subject matter.

### Rejections under 35 USC §§102(b) and 103(a)

Claims 1, 6-11, and 16-20 were rejected under Section 102(b) as being anticipated by US 2002/0103865 – Lilly (hereinafter “Lilly”). Claims 2-5, 12, 14, and 15 were rejected under Section 103(a) as being unpatentable over Lilly taken in view of US 5,841,142 – Duftschmid et al. (hereinafter “Duftschmid”). It is respectfully submitted that new claims 21-30 define patentably over these references, taken singly or in any combination that might suggest itself to those of ordinary skill in the pertinent arts.

New independent claim 21 is a method claim that includes much of the subject matter of original claim 2, including the step of calculating a radiation dose. This limitation distinguishes the claimed invention from Lilly, as conceded in the Office Action. Thus, the sole issue is whether the subject matter of claims 21-30 is unpatentable over Lilly in view of Duftschmid under Section 103(a). It is respectfully submitted that the claimed subject matter is patentable over these references.

Claim 21 defines the step of “calculating a radiation dose to which the person is exposed *based on observatory data available from at least one observatory....*” [Emphasis added.] Support for this limitation is found in paragraph [0025] of the published application. It is respectfully submitted that neither Lilly nor Duftschmid teaches or suggests the use of observatory data in the calculation of a radiation dose. As mentioned above, Lilly does not disclose the calculation of a radiation dose. In Duftschmid, the radiation dose is calculated using data from radiation measurements taken on the airplane itself, and not from any remote source, such as an observatory. Thus, according to the teachings of Duftschmid, the airplane must carry radiation measuring equipment, such as a Geiger-Müller counting tube, a photomultiplier counter, or an ionization chamber, to obtain the radiation data. See Duftschmid, column 3, lines 18-35; and column 4, lines 13-18 and 42-47. In the claimed invention, by contrast, the airplane needs to carry no such equipment, thereby effecting great savings in costs.

Since nothing in either Lilly or Duftschmid teaches or suggests the calculation of a radiation dose using observatory data, as defined in claim 21, there is no combination of these references that would lead a person of ordinary skill in the pertinent arts to the method defined in claim 21. At most, the suggested combination would yield a method that requires the use of radiation measurements taken on board the airplane, not a method that uses observatory data.

Accordingly, it is respectfully submitted that claim 21 defines patentably over the cited references, taken singly or in any combination that might reasonably suggest itself to a person of ordinary skill in the pertinent arts. Therefore, it is respectfully submitted that claim 21 should be allowed.

Claims 22-30 depend from claim 21, and further define the novel aspects of the present invention. These claims should likewise be allowed.

Other Issues

Minor amendments have been made in the specification to correct errors in grammar and syntax, and to provide better internal consistency in terminology. No new matter has been added.


It is noted that the parts of the specification designated as "Annex 1" and "Annex 2" were omitted from the published application (US 2007/0129973 A1). The application as filed, as verified on PAIR, includes these parts, and any patent that may issue from this application should include the entire specification as filed.

Summary and Conclusions

Entry of the above amendment, including new claims 21-30 and the above amendments to the specification, is respectfully requested. Claims 21-30 are respectfully submitted to be allowable over the art of record. The allowance of these claims and the passage of the application to issue are earnestly solicited.

Should there be any further issues remaining in the application, the Examiner is respectfully requested to telephone the undersigned attorney of record to expedite the prosecution of the application to issue.

Respectfully submitted,



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